Creating Labeled "Stand-Alone" Figures in LaTeX Using WARMreader and Adobe Illustrator Under Mac OS X

Francesco Costanzo
Engineering Science and Mechanics
The Pennsylvania State University
University Park, PA 16802
USA
costanzo@engr.psu.edu

Gary L. Gray
Engineering Science and Mechanics
The Pennsylvania State University
University Park, PA 16802
USA
gray@engr.psu.edu

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Abstract In this paper, we discuss our experience as Mac users who lived through the transition that took us from LaTeXing with Textures under Mac OS 9 to LaTeXing with teTeX and TeXShop under Mac OS X. For us, one of the most difficult yet rewarding aspects of this transition concerned the creation of "stand-alone" figures containing labels and annotations prepared using LaTeX. By "stand-alone" figure we mean a figure in a given format (most usually EPS and/or PDF), which can be imported by one of the many graphics import commands available in LaTeX.

Around April or May 2001, after the switch to Mac OS X, teTeX and TeXShop, we found that, because of a number of issues concerning font management under OS X, translation between EPS and PDF formats, as well as a few bugs in Illustrator, we could no longer use our old labeling strategy. That strategy was (*i*) create labels and annotations in an otherwise empty LaTeX document; (*ii*) typeset that document; (*iii*) open the resulting EPS file with Adobe Illustrator; (*iv*) copy the labels and annotations from the EPS file in question and paste them into the figure at hand. When that figure was saved out of Illustrator and imported into a LaTeX document on under Mac OS 9, the fonts would preview and print properly. This was no longer possible under Mac OS X.

After some experimentation, we found a solution using the WARMreader package, developed by Ross Moore and Wendy McKay, along with an Illustrator plug-in called Marked-Objects created by Tom Ruark of Adobe Systems. In this paper we will describe why we are interested in creating stand-alone figures, why we chose to use WARMReader, and we will describe the techniques we have developed to create figures. The paper also describes the use of an AppleScript application created by the authors to aid in the figure labeling process.